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ABSTRACT

Each of one third of all Pennsylvania public high schools were assessed in 1974, 75 and 76 so that all high school students were assessed during this three-year period. The results indicate that eleventh grade female students displayed a significantly more positive attitude toward work than did the male students when responding to work attitude statements such as "To me the most important thing about work is the good feeling I get from it." The female students also displayed a significantly higher level of disagreement than did male students with negative statements such as "The prospect of working most of my adult life depresses me." Females answered more questions correctly on the Vocational Knowledge Test; however, both groups answered fewer than half of the questions correctly. Large numbers of both male and female students expressed similar difficulties with career planning. A slight majority of all eleventh grade students had not made a definite career choice. (BN)

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SEX DIFFERENCES IN VOCATIONAL ATTITUDES AND KNOWLEDGE OF ELEVENTH GRADE STUDENTS IN PENNSYLVANIA

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1978

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Summary

Are there significant differences between Pennsylvania eleventh grade female students and male students in:

1. Their attitudes toward work?
2. Their knowledge of occupations?

Answers to the above questions are vital; good work attitudes and wise choice of occupation have a direct effect on personal welfare and society in general. Further, knowledge of the work attitudes of the student body gives insight to the future educational needs of these students.

Eleventh grade female students, as a group, displayed a significantly more positive attitude toward work than did the male students when responding to work attitude questions such as:

1. To me, the most important thing about work is the good feeling I get from it.
2. Doing a job well, day in and day out, is important to me.
3. I feel that working will give me a high sense of accomplishment.

The female students also displayed a significantly higher level of disagreement than did male students with negative statements such as:

1. The prospect of working most of my adult life depresses me.
2. The only good part of a job is the pay check.
3. If I could live comfortably on welfare, I would not work.

Female students answered more questions correctly on the Vocational Knowledge Test than did male students. However, both groups answered less than half of the Vocational Knowledge questions correctly.

Large numbers of both male and female students expressed similar difficulties with career planning and a slight majority of all eleventh grade students had not made a definite career choice.

Sex Differences in Vocational Attitudes and Knowledge of Eleventh Grade Students in Pennsylvania

Introduction

The student's attitude toward the world of work and knowledge of occupations has a great influence upon the choice of an occupation. In turn, choice of an occupation directs the student into specific educational programs which provide the necessary preparation in securing a desired job. Hence, given the importance of career choice on personal welfare, the vocational attitudes and vocational knowledge of the eleventh grade student deserve careful study.

The purpose of this study is to identify (1) differences in career attitudes held by male and female eleventh grade students and (2) differences in vocational knowledge test scores earned by male and female students who took the Pennsylvania Educational Quality Assessment (EQA) during school years 1973-74, 1974-75 and 1975-76.

Goal VIII of Pennsylvania's Ten Goals of Quality Education reads:

> "Quality education should help every child understand the opportunities open to him or her to prepare for a productive life and help each child to take full advantage of these opportunities."

Accordingly, Goal VIII of the Educational Quality Assessment is divided into two sections: VIII-A, Career Attitude and VIII-K, Career Awareness. Career attitude has two divisions: (1) Work Attitude, defined as "Willingness to give best efforts on a job, and belief that work leads to a sense of accomplishment in one's self," and (2) Career Planning, defined as "Acceptance of the necessity of vocational planning and willingness to engage in career planning activities." Career awareness is described as "Knowledge of the duties, training, salary and educational requirements of various occupations."

Students Tested

Four separate groups of eleventh grade students are examined in this study: all the eleventh grade students who took the EQA in 1974, 1975 and 1976. One-third of all Pennsylvania public high schools were tested in 1974, 1975 and 1976 so that all schools were assessed during this three-year period. Results for any one year should not be interpreted as representative of all eleventh grade students in the state as the characteristics of these student groups may change year to year when differing sets of schools are tested.

Because so many students participated in the EQA program during the years studied, smaller groups of students were used for ease of computation of statistics. The number of students tested each year and the number of students actually included in this study are reported in Table 1. The total number of students is broken down into number of male and female students since this is a study of male-female vocational differences. The percentages of female and male students included in this study (as shown in Table 1) does not differ significantly from the percentages of all females and males in the Commonwealth of Pennsylvania. The Pennsylvania

Table 1

Number of Students Participating in the EQA Testing Programs in Pennsylvania for Selected Years Described by Sex

		Academic Year					
		1973-74		1974-75		1975-76	
		Number	%	Number	%	Number	%
Number of Students Tested	Total	47,042		60,129		40,642	
	Female	23,583	50.1	27,485	45.7	18,212	44.8
	Male	22,527	47.9	20,120	48.4	19,533	48.1
	Not Given	932	2.0	3,524	5.9	2,877	7.1
Number of Students in Study	Total	3,289		3,313		3,311	
	Female	1,695	51.5	1,714	51.7	1,702	51.4
	Male	1,585	48.2	1,549	46.8	1,515	45.8
	Not Given	9	0.3	50	1.5	94	2.8

Department of Education does not prepare high school enrollments categorized by sex. However, the percentages of male/female students in the groups of students studied are in agreement with the percentages of males and females reported by EQA over all 572 schools (141,215 eleventh grade students) participating in the EQA testing program for the years 1974, 1975 and 1976 (Hertzog, 1977, p. 28). For all eleventh grade classrooms in Pennsylvania an average of 51.5 per cent females was found. Total eleventh grade public school enrollments were 182,408 for the 1973-74 academic year (A Summary of Enrollments, 1974); 181,219 for the 1974-75 academic year (A Summary of Enrollments, 1975); and 179,743 for the 1975-76 academic year (A Summary of Enrollments, 1976). It is necessary for the groups of students studied to have the appropriate percentages of male and female students; as seen in Table 1 this is true of the groups included in this study.

Sex Differences in Vocational Attitude Scores

Vocational attitude comprises section F of the EQA battery and assesses the students attitude toward (a) work and (b) career planning. An example of test items from each section of VIII-A follows:

(a) the prospect of working most of my adult life depresses me.
(b) my planning for a career is a waste of time.

(1) agree (2) mostly agree (3) mostly disagree (4) disagree

Options (1) and (2) are unfavorable responses and options (3) and (4) are favorable responses. The student score on this subscale is expressed as a total percentage of favorable responses. Thus, the VIII-A subscale is criterion-referenced rather than norm-referenced. There are 28 items contained in the VIII-A subscale all of which are answered by one of the four options shown above. Goal VIII-A scores for the 1974 group of students are displayed in Table 2.

Overall, females averaged about 4 points higher on this subscale than did males, a practically and significantly important difference. Females scored higher on 12 of the 14 items under "Work Attitude" and significantly higher than males on 10 of those 12 items. Males scored slightly higher than females on item 26 and the same as females on item 23. Hence, females consistently earned equal or better scores than males for this section. Significant item differences may or may not be practically statistically important when male-female mean differences greater than ±0.10 will be significant due to the large sample sizes. However, the consistency of the female-male response patterns is significant.

Generally, the per cent favorable response is well over 50 per cent (the exception being item 28). For this item males showed significantly more concern for earning power than did females. A similar pattern is noted for related item 15. Females were more concerned than males with job satisfaction and accomplishment. Items 23 and 26 deal with actual work practices. For these items no significant male-female differences are observed. In general, group female and male responses to the Work Attitude items are favorable to highly favorable. At least 90 per cent of all students believe doing a job well is important and will be gratifying. About 90 per cent prefer working to welfare as a life style.

The "Career Planning" items are not as discriminating on the sex variable as are the Work Attitude items, although 6 of the 14 items do show a significant female-male response difference. For each of the six items found significant, females scored higher than males. About 51 per cent of the eleventh grade students are "uncertain about which occupation to choose," this group being equally divided into males and females. Significantly more males than females reported they would wait until out of school to decide upon an occupation, although this entire group comprised 15 per cent of the total sample. Males were also significantly more concerned with an uncertain future than were females when deciding about a job. About the same number of females and males are threatened by making a definite career choice (41 per cent of all students), yet 78 per cent of all students have identified an occupation they find appealing. But even at the eleventh grade level 30 per cent of all students (equal numbers of females and males) report they keep changing their occupational choices. While only 20 per cent of all students report not giving much thought to career choice the significant majority of these students were male. Only 5 per cent of all students felt planning for a career was a waste of time; yet 20 per cent of all eleventh grade students report not giving thought to career choice, 24 per cent believe they will enter an occupation by chance, and 9 per cent believe there is no need to plan for a career since "something will come along sooner or later." In each of these cases males are significantly more negative than are females.

Males and females in significant numbers express doubt, concern and difficulty with career planning. For the total sample 51 per cent of the students expressed

Table 2

Responses to Vocational Attitude - Goal VIII-A, Grade 11
Section F, with Analysis of Variance for Sex

Twenty-eight items measure attitude toward work, career choice and efforts at establishing long-range career and educational plans. Response options are (1) agree, (2) mostly agree, (3) mostly disagree and (4) disagree.

	Per Cent Response				Per Cent Favorable Response	Mean For Males	Mean For Females	F-Test
WORK ATTITUDE	(1)	(2)	(3)	(4)				
* 1. The prospect of working most of my adult life depresses me.....	11	16	31	42	73	2.936	3.109	23.69
* 3. The only good part of a job is the paycheck.....	12	18	32	38	70	2.823	3.085	53.44
* 4. I would not give my best efforts to a job if others at the job refused to do their best.....	6	10	31	53	84	3.132	3.411	74.43
* 6. To me, the most important thing about work is the good feeling I get from it.....	37	41	14	8	78	2.903	3.182	71.81
* 7. Doing a job well, day in and day out, is important to me.....	55	37	5	3	92	3.314	3.530	66.69
*10. I feel that working will give me a high sense of accomplishment...	50	40	7	3	90	3.225	3.446	61.56
13. If the money were not really needed, nobody would work.....	22	24	26	28	54	2.542	2.601	2.29
*15. It doesn't matter which job I choose as long as it pays well.....	6	9	32	53	85	3.150	3.419	73.12
*16. If I could live comfortably on welfare, I would not work.....	5	5	21	69	90	3.408	3.673	87.35
18. If I won a state lottery ($10,000 a year for life), I would not work at a job.....	13	13	29	45	74	3.052	3.065	0.12
*20. I believe in working only as hard as I have to.....	14	18	32	36	68	2.801	2.963	19.48
23. I often don't finish work I start.....	5	10	35	50	85	3.297	3.296	0.10
26. I'm known as a good worker, no matter what the job is.....	26	52	14	8	78	3.011	2.917	9.49
*28. *How much I earn* is my major consideration when I look at possible occupations.....	24	31	26	19	45	2.164	2.499	82.68
CAREER PLANNING								
2. I am uncertain about which occupation to choose.....	28	23	21	28	49	2.454	2.484	0.51
* 5. I'm not going to worry about choosing an occupation until I'm out of school.....	7	8	27	58	85	3.198	3.448	59.78
* 8. I often wonder why I should try to decide upon a job when the future is so uncertain.....	18	25	30	27	57	2.582	2.708	11.43
9. Making a definite career choice scares me.....	18	23	27	32	59	2.730	2.694	0.82
11. I really can't find an occupation that has much appearl to me.....	9	13	29	49	78	3.103	3.197	7.15
12. I know a great deal about the educational requirements of jobs....	16	32	29	23	48	2.438	2.343	6.81
*14. My planning a career is a waste of time.....	2	3	24	71	95	3.549	3.674	26.09
*17. I probably will get into an occupation mostly by chance.....	9	15	33	43	76	2.975	3.189	38.99
*19. I have not given much thought to a career choice.....	9	11	25	55	80	3.089	3.382	67.68
21. I keep changing my occupational choice.....	13	17	28	42	70	2.972	2.915	2.20
22. I would not want to hold the same job for more than five or ten years.....	6	10	35	49	84	3.258	3.262	0.01
24. I doubt that I could keep interested in the same job over several years.....	7	11	34	48	82	3.239	3.204	1.10
*25. There is no need to plan for a career because something will come along sooner or later.....	4	5	26	65	91	3.401	3.612	57.85
27. I really don't know how to tie together my interests and abilities as they relate to a future job choice.....	19	27	29	25	54	2.522	2.610	5.40
* Overall						55.946	59.402	67.04

*p<0.001

(Items marked by an asterik show statistically significant male/female responses.)

uncertainty in choosing an occupation, 52 per cent reported lacking knowledge of the educational requirements of jobs, and 46 per cent report not knowing how to tie together their interests and abilities as they relate to a future job choice. Each of these groups is composed of almost equal numbers of males and females. Hence, both sexes express similar difficulties with the career planning process.

Sex Differences in Vocational Knowledge Scores

EQA Goal VIII-K, section G, measures the student's knowledge of the duties, training, salary and educational requirements of various occupations. Two types of items are used: matching and multiple choice. The initial 15 items require the respondent to match occupation titles with appropriate occupation descriptions (duties, attributes, educational requirements, psychomotor needs, etc.). The remaining 20 items are multiple choice questions all of the form:

1. Today there is a great need for, and short supply of, women in

   (a) law enforcement
   (b) teaching
   (c) construction
   (d) retail sales

The student's score is the number of correct responses out of the 35 possible points. This is a norm-referenced scoring procedure.

The average score on the vocational knowledge test for all 3,268 students is about 16 (a student usually answers 16 of the 35 questions correctly). The average number of questions answered correctly by female students is 16.8 (N=1690) and by male students 15.8 (N=1578). These total score averages for male and female students are significantly different at the 0.001 level ($F=24.61$, $df=1,3266$). In other words, for the Vocational Attitude EQA subscale female students averaged one more correct answer than did male students. However, as a group, female students answered about 48 per cent of all questions correctly and male students answered about 45 per cent of all questions correctly. Although female students answered more questions correctly than did males both groups answered less than half the vocational knowledge questions correctly.

A breakdown of correct answers by each sex for each question is given in Table 3. Females showed superior ability over males in matching job titles with descriptions. One matching item only had a higher percentage of correct male responses--the description for the title "funeral director" (item 9). The most known occupational requirements for this sample were (1) lawyer, (2) salesman, (3) mailman, (4) drill press operator, (5) teacher, (6) decorator, (7) principal, (8) practical nurse, (9) dietician, (10) newspaper editor, (11) dentist, (12) registered nurse, (13) sculptor, (14) insurance investigator and (15) funeral director. It would appear that the most visible occupations are the best known to the students.

Male-female differences for the 20 multiple choice items follow specific patterns as shown in Table 4. Males had a significantly higher percentage than females of correct responses to 7 items, females had the higher percentage of correct responses to 6 items, and no practical differences are observed for 7 items. Males consistently scored significantly higher on those items which generally dealt with working conditions, salaries, and unemployment statistics. Females consistently scored significantly higher on those items dealing with employment opportunities and abilities required for specific occupations. No differences are observed on those

Table 3

Responses by All Students, Males, and Females to the Vocational Knowledge EQA Subscale, Section G, Matching Items

Item Number	Occupation Described (Matching)	Per Cent Correct For All Students	Per Cent Correct Male Responses	Per Cent Correct Female Responses	Corrected χ^2 Value	Probability
Matching						
* 1	Newspaper Editor	41	38.1	42.1	5.10	0.0239
2	Insurance Investigator	26	25.8	26.2	0.03	0.8529
* 3	Lawyer	66	61.0	70.6	33.02	<0.0001
* 4	School Teacher	49	46.4	52.9	11.62	0.0007
* 5	Principal	47	43.3	50.2	15.21	0.0001
* 6	Dentist	36	34.5	40.3	11.33	0.0008
* 7	Dietician	41	32.4	46.7	68.49	<0.0001
* 8	Practical Nurse	43	38.6	50.4	45.76	<0.0001
* 9	Funeral Director	23	25.4	22.4	3.93	0.0473
*10	Registered Nurse	34	31.8	40.4	25.95	<0.0001
*11	Drill Press Operator	57	54.3	60.4	11.86	0.0006
12	Sculptor	32	32.7	32.0	0.17	0.6828
*13	Interior Decorator	49	44.5	57.1	51.70	<0.0001
*14	Mailman	60	54.1	63.8	31.12	<0.0001
*15	Tractor Salesman	63	61.7	65.3	4.25	0.0392

*Male/Female differences on these test questions were statistically significant at the 0.05 level.

items dealing with job aptitudes, job benefits, and specific requirements for general occupation fields. Both sexes scored very poorly on items dealing with future employment opportunities, the number and kinds of jobs in the total work force, and unemployment rates for teen-agers.

In general, it appears students deal with the world of work in terms of what is most familiar to the student and what is perceived to be true at present. There appears to be little student ability to deal with employment opportunities and requirements in the future--even though the majority of students will be entering the labor force or job market in the future.

Are EQA Vocational Test Scores Declining?

During the years 1973-74, 1974-75 and 1975-76 all Pennsylvania schools participated in the EQA testing program. The average scores of eleventh grade females and male students for EQA Goal VIII tests are shown in Table 5.

Table 4
Responses by All Students, Males, and
Females to the Vocational Knowledge
EOA Subscale, Section G
Multiple Choice Items

Item Number	Question	Per Cent Correct for All Students	Per Cent Correct Male Responses	Per Cent Correct Female Responses	Corrected χ^2 Value	Probability
*16	Who does heavy lifting?	50	57.7	40.9	91.87	<0.0001
17	Training requirements for printer	50	48.9	50.9	1.19	0.2756
*18	Which job fits into the fine arts field?	68	65.2	70.9	11.80	0.0006
19	Which of the following is not a job benefit?	48	48.9	47.9	0.28	0.5951
*20	Highest unemployment rate for age groups	38	42.5	33.4	28.04	<0.0001
21	Identification of physical requirements for a job	45	43.3	46.7	3.61	0.0575
*22	Which job is in the hospitality field?	49	43.3	52.8	28.46	<0.0001
*23	Sedentary work involves:	33	29.8	38.2	24.49	<0.0001
24	A job aptitude required for certain jobs:	36	37.5	34.9	2.22	0.1364
25	Job requiring high ability to perceive details	52	55.4	53.8	0.81	0.3669
*26	Which job has the highest starting salary?	61	65.7	60.3	9.85	0.0017
*27	Name the occupation with a high unemployment rate.	47	50.9	45.0	10.89	0.0010
*28	Demand but short supply of women in _____	50	49.0	53.3	5.86	0.0155
29	Job security is related to:	56	57.4	56.4	0.27	0.6012
*30	Which of these is a working condition?	62	65.7	59.8	11.90	0.0006
*31	Which ability is least important to a secretary?	64	57.8	69.9	51.31	<0.0001
*32	Which worker exposed to most humid conditions?	43	45.9	41.7	5.60	0.0180
*33	A working condition would be:	59	64.3	55.5	25.48	<0.0001
34	How many different kinds of jobs in U.S.	15	14.9	16.9	2.36	0.1248
*35	Occupational area with greatest employment opportunities:	32	28.8	36.1	19.17	<0.0001

*Male/Female differences on these test questions were statistically significant at the 0.05 level.

Table 5

EQA Vocational Knowledge and Vocational Attitude
Test Score Averages for Three Years
(Eleventh Grade Only)

	VIII-A Vocational Attitude		VIII-K Vocational Knowledge	
	Male	Female	Male	Female
1974	55.946 (N=1573)	59.402 (N=1688)	15.852 (N=1578)	16.779 (N=1690)
1975	55.070 (N=1537)	59.186 (N=1699)	15.407 (N=1537)	16.494 (N=1699)
1976	55.523 (N=1490)	56.595 (N=1676)	14.857 (N=1508)	15.536 (N=1694)

Obviously, for these three academic years, the test score averages are declining. However, each year a completely new group of eleventh grade students participated in the EQA testing program. If these groups of students differed from year to year, the changes in test score averages may reflect these group differences rather than an actual decline in vocational knowledge or attitude scores. Because some schools which gave the EQA tests in 1974 also gave the EQA tests in 1977, it is possible to look at only the average scores for the same schools to see if a decline in scores has occurred. These averages are shown in Table 6. For the 115 schools which administered the EQA tests in both 1974 and 1977 a decline of about 1.5 points in the Vocational Attitude test and a decline of almost one point for the Vocational Knowledge test was observed. While the decline in scores is statistically significant, these declines may not be large enough to be of educational importance. Further, the groups of students tested each year have also significantly changed in composition. Specifically, the racial compositions of these groups was seen. The racial composition of a group of students greatly affects the average group score; therefore, it is likely the declining EQA Goal VIII test score averages are due to differing groups taking the EQA tests over these three academic years. It will be necessary to study future year averages before it is possible to determine whether EQA test scores may show true decline in the vocational knowledge and attitudes of Pennsylvania eleventh grade students.

Factors Which Influence Vocational Knowledge and Attitudes

Which school characteristics are common to those schools where students earn high EQA Goal VIII Scores? The following characteristics as measured by the EQA had no influence upon student EQA vocational scores: (1) the size of the school and the number of students attending the school, (2) the amount of money spent per student, (3) the use of "traditional" or innovative curriculum programs, (4) how many years of college attended by the classroom teacher, (5) the number of students in classes, (6) how many hours per week classroom teachers were required to teach, (7) how many years the teacher has taught, and (8) the number of females versus males in the classes. Slightly higher EQA vocational test scores were observed for those students who attended schools where (1) classroom teachers reported satisfaction with the school and school district administration, (2) the students reported adequate accessibility to the school library, and (3) the students reported adequate accessibility to the high school counselor. Higher EQA vocational test scores were observed for those students who attended schools where (1) the classroom teacher reported favorable parent attitudes toward the school, (2) the teachers reported the least number of problems in the classroom, (3) teachers reported a high level of enjoyment with

Table 6

Average Goal VIII Test Scores for Schools Participating in the EQA Programs in Both 1974 and 1977

	Grade 5 (N=345)			Grade 8 (N=132)			Grade 11 (N=115)		
	1974 Average Score	1977 Average Score	r	1974 Average Score	1977 Average Score	r	1974 Average Score	1977 Average Score	r
Vocational Attitude[1]	--	--	--	--	--	--	57.9	56.3*	0.30
Vocational Knowledge	13.9	13.9	0.64	16.3	15.8*	0.75	16.0	15.2*	0.65
Average School Enrollments	70.0	63.3*	0.91	217.6	203.2*	0.92	251.3	245.1	0.99
Type of Community	1.9	1.9	0.90	1.8	1.8	0.90	1.6	1.6	0.91
Per Cent of White Students	94.4	93.4*	0.92	92.4	90.2*	0.95	94.9*	91.5*	0.89

[1]The Vocational Attitude Test is given to eleventh grade students only.
*Denotes that the difference between the 1974 and 1977 school average was statistically significant at the 0.01 level.

their jobs, and (4) the teachers were satisfied with the level of student performance in their classes. Students who earned the very highest EQA vocational knowledge and attitude scores attended schools where (1) attendance rates were the very highest and (2) the most satisfactory relationships between teacher and parent were reported by the classroom teacher. These school characteristics were equally influential upon female and male eleventh grade students.

Generally, home environment was more influential upon student EQA vocational knowledge and attitude scores than were school factors. Students with average (or slightly above average) EQA vocational test scores came from (1) homes located in urban centers of Pennsylvania, (2) homes with the most favorable conditions as reported by the student, (3) an atmosphere where personal intellectual characteristics were considered more important than social characteristics in determining the student's popularity, and (4) a background which encouraged high vocational desires and expectations. Students with the very highest EQA vocational test scores came from homes where (1) the fathers had the jobs with the best pay and the highest educational requirements, (2) the mothers had the highest levels of education, (3) the very least number of family moves were reported, and (4) the parents, in the opinion of the students, had the greatest interest in schoolwork and the school. Again, these influences were equally strong for both female and male eleventh grade students.

Student EQA vocational test scores became less dependent upon home environment as the student progressed through the school grades. Vocational knowledge scores of eleventh graders were not as highly related to father's occupation, mother's educational level, and home climate as were the EQA scores of eighth grade and fifth

grade students.

Appendix A displays all correlation coefficients for Vocational Attitude and Knowledge with the student background variables.

In addition, the reader is referred to Educational Quality Assessment: A Profile of Pennsylvania's Program (Seiverling, 1976) and Getting Inside the EQA Inventory (Hertzog, 1976) which provide clarification of the EQA Goal VIII objective and history. The reader may also wish to reference the Goal VIII, Career Awareness (Guerriero, 1976) volume of the PDE Working Paper Series "A Guide to the Analysis and Interpretation of EQA Scores and Related Intervention Techniques."

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Appendix A

Summary of Correlation Coefficients
for the Combined 1974, 1975,
and 1976 Data*

	VIII-K			VIII-A		VIII-K			VIII-A
Grade Level	5	8	11	11		5	8	11	11
Number of Schools	2257	737	572	572					
Variable					Variable				
GRENROLL**					FOCC	.65	.60	.51	*.18*
PCTATTEN	.45	.65	.53	*.23*	OCDESIRE	—	—	.32	*.15*
INSEXADM		*-.20*			OCEXPECT	—	—	.28	*.14*
TLOCALE	*.10*		*.12*	*.14*	PCTGIRLS				
TSATPAR	.40	.48	.49	.25	MEDUC	.62	.51	.47	*.15*
TSATFS	*.16*	.32	*.09*		RESIDE	*-.20*	-.32	*-.16*	*-.09*
TSATST	.33	.40	.34	*.22*	PCTWHITE	.52	.72	.61	.26
TCLATT	.26	.36	.31	*.15*	LIBRARY	.30	*.18*	*.15*	.26
PERSAD	*.20*	*.23*	*.15*	*.11*	COUNSEL	—	*.11*	*.20*	.39
PERDAD	*.15*	*.19*	*.16*	*.12*	STABLE	.38	.50	*.24*	.32
CLPRACT		*-.15*			PARATT	.45	.51	.41	.52
PERLERAT	.44	.48	.36	*.15*	MORESB	—	-.33	-.26	*.10*
TPERPAR	.40	.40	.27	*.14*	MORESG	—	-.43	-.35	*.10*
TPEP					VALUES	—	*-.13*		.33
PCTFEM	*.12*	*-.11*	*-.10*	*-.11*	HOMECLIM	.49	.38	*.21*	.43
TEDUC			*.12*						
CLSIZE	*-.09*								
HRPERWK	*.07*								
TEXPER	*.10*								
PERPERDY				*.09*					

*All correlations reported are significant at the 0.01 level. Stronger relationships are in bold face.

**Variable labels are explained in detail on the following two pages.

FROM ADMINISTRATORS, DEPARTMENT RECORDS AND TEACHERS

VARIABLE AND COMPUTER CODE	MEASURE	WEIGHTING	INDEX DESCRIPTION
GRENROLL (Grade enrollment)	The school administrator reported enrollment of the grade under consideration.	Actual number of students in the participating grade.	A higher value indicates a larger grade enrollment.
PCTATTEN (Percentage attendance)	Class data were obtained from department records for 1975-76, i.e. the district per cent attendance for class while in 10th grade.	Expressed to nearest tenth of a per cent.	A higher value indicates a higher attendance rate.
INSEXADM (Instructional expenses per average daily membership)	The instructional expenses of the secondary program were divided by the Average Daily Membership of the secondary schools. (0200 of budget)	Expressed as an equivalent standard score. See APPENDIX C.	A higher value indicates that the district expends relatively more funds per student for secondary instruction.
TLOCALE (Teacher locale)	The teachers reported where they spent most of their lives.	2 = More than 100 miles from boundaries of this school district 1 = More than 30 miles but less than 100 miles 0 = In or within 30 miles	A higher value indicates that the school teaching staff is drawn from more distant areas.
TSATPAR TSATFS TSATST (Teacher satisfaction with relationships with:) 1) Parents 2) Staff 3) Students	The teachers reported how satisfied they were with their relationship with: Parents and parent groups Fellow staff members Students	3 = Very satisfied 2 = Somewhat satisfied 1 = Somewhat dissatisfied 0 = Very dissatisfied	A higher value on any of these indicies indicates that the teaching staff of the school is more satisfied with its relationships with the group.
TCLATT (Attitude toward classroom teaching)	The teachers reported if they enjoy classroom teaching.	4 = Almost always true 3 = Usually true 2 = Sometimes true 1 = Seldom true 0 = Almost never true	A higher value indicates that teaching staff more often enjoy classroom teaching.
PERSAD (Teacher perception of school administration)	The teachers responded to 6 items concerning their feelings about the school administration.	4 = Always true 3 = Usually true 2 = Sometimes true 1 = Seldom true 0 = Never true Range: 0-24	A higher value on this index indicates a more positive attitude of the school's teaching staff toward the school administration.
PERDAD (Teacher perception of district administration)	The teachers responded to 3 items concerning their feelings about the district administration.	4 = Always true 3 = Usually true 2 = Sometimes true 1 = Seldom true 0 = Never true Range: 0-12	A higher value on this index indicates a more positive attitude of the school's teaching staff toward the district administration.
CLPRACT (Classroom practices)	The teachers reported the extent to which they used 11 classroom practices judged to be innovative (e.g., pupil participation in lesson planning).	3 = I use it daily 2 = I use it weekly 1 = I use it monthly 0 = I do not use it Range: 0-33	A higher value indicates the teaching staff report more frequent usage of these practices.
PERLERAT (Teacher perception of learning atmosphere)	The teachers indicated whether each of 13 school problems constituted a problem in their school.	1 = No 0 = Yes Range: 0-13	A higher value indicates a positive learning atmosphere, that teachers feel fewer of the listed problems affect their school.

FROM ADMINISTRATORS, DEPARTMENT RECORDS, AND TEACHERS (Continued)

VARIABLE AND COMPUTER CODE	MEASURE	WEIGHTING	INDEX DESCRIPTION
TPERPAR (Teacher perception of parents)	The teachers indicated whether each of 5 conditions related to parental attitude constituted a problem in their school.	1 = No 0 = Yes Range: 0-5	A higher value indicates a positive attitude on the part of the teacher toward the parents and home.
TPEP (Teacher perception of environmental press)	The teachers responded to 8 items regarding their feelings about their self-assuredness.	Almost always true of me Often true of me Sometimes true of me Seldom true of me Almost never true of me Range: 0-32	A higher value indicates that the teachers are relatively more self-assured.
PCTFEM (Per cent female teachers)	The teachers indicated their sex.	Expressed in percentage.	A higher value indicates that the school has a higher percentage of female teachers.
TEDUC (Teacher education)	The teachers indicated the level of formal education they have attained.	4 = Doctor's degree 3 = Master's degree plus 1 year 2 = Master's degree or equivalency 1 = Bachelor's degree 0 = No degree	A higher value indicates that the school's instructional staff reported a higher level of formal education.
CLSIZE (Class size)	The teachers reported their average class size excluding supervisory duties such as study hall.	Expressed as average class size for all teachers.	A higher value indicates greater average class size.
HRPERWK (Teacher hours of instruction per week)	The teachers reported the number of clock hours they are assigned to classroom instruction per week. week.	Expressed as average hours per week.	A higher value indicates that the teachers of the school spend relatively more hours in the classroom.
TEXPER (Teacher experience)	The teachers reported the total years of service in education including current school year.	Expressed as average years' experience.	A higher value indicates that the teachers of the school have relatively more years of teaching experience.
PREPERDY[1] (Number of teacher preparations per day)	The teachers reported the number of different courses, on the average, they teach per day.	Expressed as average number of preparations per day.	A higher value indicates that the teachers have relatively more preparations per day.

[1] Grade 11 only